

# THE SOUTHERN CALIFORNIA DENSE GPS GEODETIC ARRAY

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The Southern California Earthquake Center is coordinating, an effort by scientists at the Jet Propulsion Laboratory, the U.S. Geological Survey, and various academic institutions to establish a dense 250 station, continuously recording GPS geodetic array in southern California for measuring crustal deformation associated with slip on the numerous faults that underlie the major metropolitan areas of southern California. This array will make use of high precision GPS techniques, and will complement the existing southern California seismic network. Estimates of the time to the next earthquake on any active fault segment are based on the fault's historic record of earthquakes, long term slip rate, and displacements during previously earthquakes. For only a very small number of faults are any of these factors known with any degree of confidence. Since the patterns of crustal deformation in space and time govern when and where earthquakes will occur, the proposed GPS network will have major implications for earthquake hazard assessment and mitigation in southern California, allowing scientists to determine the slip rates on the faults in the region.